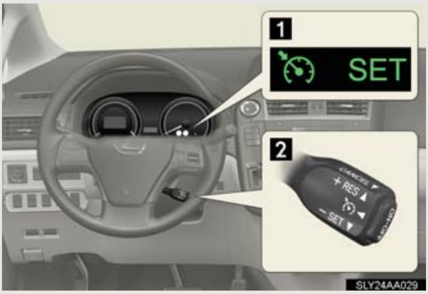
Cruise control*

Use the cruise control to maintain a set speed without depressing the accelerator pedal.

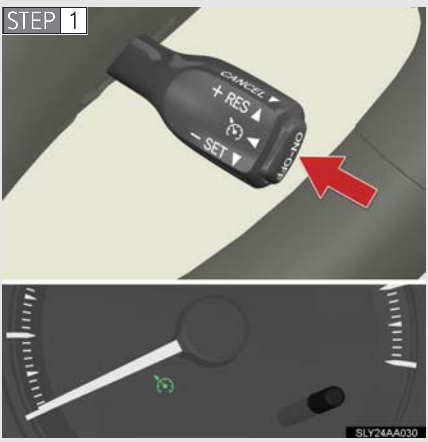


1 Indicators

2 Cruise control switch

Setting the vehicle speed

STEP 1



Press the “ON-OFF” button to activate the cruise control.

Cruise control indicator will come on.

Press the button again to deactivate the cruise control.

*: If equipped

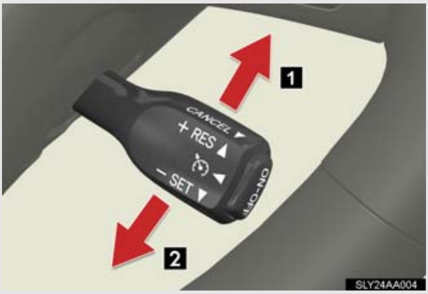
Accelerate or decelerate the vehicle to the desired speed, and push the lever down to set the speed.

"SET" indicator will come on.

The vehicle speed at the moment the lever is released becomes the set speed.

Adjusting the set speed

To change the set speed, operate the lever until the desired set speed is obtained.



1 Increases the speed

2 Decreases the speed

Fine adjustment: Momentarily move the lever in the desired direction.

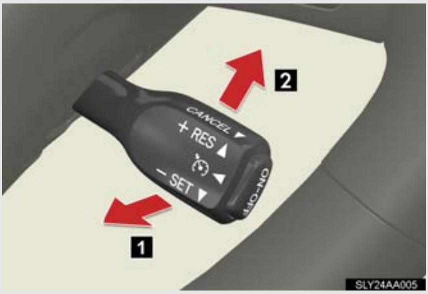
Large adjustment: Hold the lever in the desired direction.

The set speed will be increased or decreased as follows:

Fine adjustment: By approximately 1 mph (1.6 km/h) each time the lever is operated

Large adjustment: The set speed can be increased or decreased continually until the lever is released.

Canceling and resuming the constant speed control



1 Pulling the lever toward you cancels the constant speed control.

The speed setting is also canceled when the brakes are applied.

2 Pushing the lever up resumes the constant speed control.

Resuming is available when the vehicle speed is more than approximately 25 mph (40 km/h).

Cruise control can be set when

- The shift position is in D.
- Vehicle speed is above approximately 25 mph (40 km/h).

Accelerating after setting the vehicle speed

- The vehicle can be accelerated normally. After acceleration, the set speed resumes.
- Even without canceling the cruise control, the set speed can be increased by first accelerating the vehicle to the desired speed and then pushing the lever down to set the new speed.

Automatic cruise control cancelation

Cruise control will stop maintaining the vehicle speed in any of the following situations.

- Actual vehicle speed falls more than approximately 10 mph (16 km/h) below the preset vehicle speed.
  At this time, the memorized set speed is not retained.
- Actual vehicle speed is below approximately 25 mph (40 km/h).
- Enhanced VSC is activated.

If the cruise control indicator light flashes

Press the "ON-OFF" button once to deactivate the system, and then press the button again to reactivate the system.
If the cruise control speed cannot be set or if the cruise control cancels immediately after being activated, there may be a malfunction in the cruise control system. Have the vehicle inspected by your Lexus dealer.

⚠ CAUTION

To avoid operating the cruise control by mistake

Switch the cruise control off using the "ON-OFF" button when not in use.

Situations unsuitable for cruise control

Do not use cruise control in any of the following situations.
Doing so may result in loss of control and could cause an accident resulting in death or serious injury.

- In heavy traffic
- On roads with sharp bends
- On winding roads
- On slippery roads, such as those covered with rain, ice or snow
- On steep hills
  Vehicle speed may exceed the set speed when driving down a steep hill.

Dynamic radar cruise control*

Dynamic radar cruise control supplements conventional cruise control with a vehicle-to-vehicle distance control. In vehicle-to-vehicle distance control mode, the vehicle automatically accelerates or decelerates in order to maintain a set following distance from vehicles ahead.



1 Indicators
2 Display
3 Set speed
4 Vehicle-to-vehicle distance button
5 Cruise control switch

*: If equipped

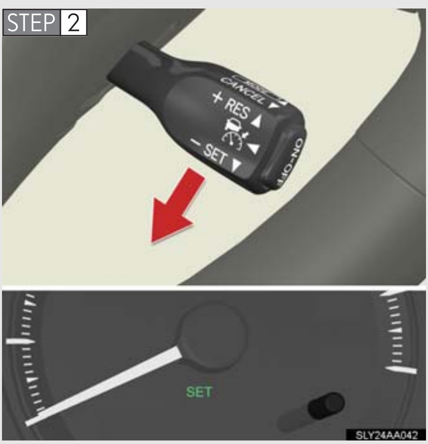
Setting the vehicle speed (vehicle-to-vehicle distance control mode)



Press the "ON-OFF" button to activate the cruise control.

Radar cruise control indicator will come on.

Press the button again to deactivate the cruise control.



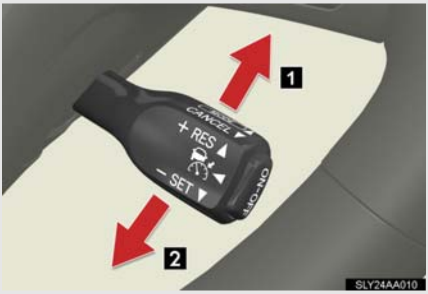
Accelerate or decelerate the vehicle to the desired speed, and push the lever down to set the speed.

"SET" indicator will come on.

The vehicle speed at the moment the lever is released becomes the set speed.

Adjusting the set speed

To change the set speed, operate the lever until the desired set speed is displayed.



1 Increases the speed

2 Decreases the speed

Fine adjustment: Momentarily move the lever in the desired direction.

Large adjustment: Hold the lever in the desired direction.

In the vehicle-to-vehicle distance control mode, the set speed will be increased or decreased as follows:

- When the set speed is shown in "MPH"

  Fine adjustment: By approximately 1 mph (1.6 km/h) each time the lever is operated

  Large adjustment: By approximately 5 mph (8 km/h) for each 0.75 seconds the lever is held

- When the set speed is shown in "km/h"

  Fine adjustment: By approximately 0.6 mph (1 km/h) each time the lever is operated

  Large adjustment: By approximately 3.1 mph (5 km/h) for each 0.75 seconds the lever is held

In the constant speed control mode (→P. 223), the set speed will be increased or decreased as follows:

Fine adjustment: By approximately 1 mph (1.6 km/h) each time the lever is operated

Large adjustment: The set speed can be increased or decreased continually until the lever is released.

Changing the vehicle-to-vehicle distance



Pressing the button changes the vehicle-to-vehicle distance as follows:

1 Long
2 Medium
3 Short

The vehicle-to-vehicle distance is set automatically to long mode when the "POWER" switch is turned to ON mode.

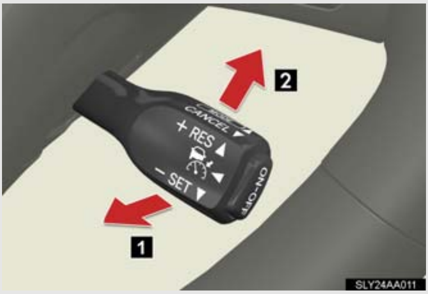
If a vehicle is running ahead of you, the preceding vehicle mark will also be displayed.

Vehicle-to-vehicle distance settings

Select a distance from the table below. Note that the distances shown correspond to a vehicle speed of 50 mph (80 km/h). Vehicle-to-vehicle distance increases/decreases in accordance with vehicle speed.

Distance options	Vehicle-to-vehicle distance
Long	Approximately 160 ft. (50 m)
Medium	Approximately 130 ft. (40 m)
Short	Approximately 100 ft. (30 m)

Canceling and resuming the speed control



1 Pulling the lever toward you cancels the cruise control.

The speed setting is also canceled when the brakes are applied.

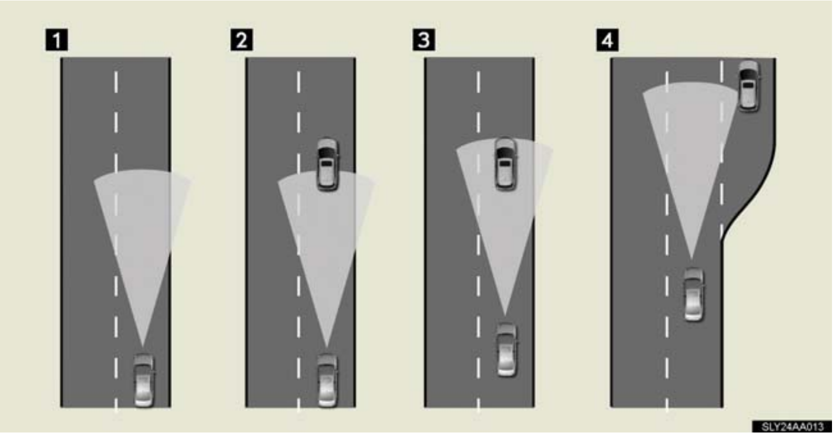
2 Pushing the lever up resumes the cruise control and returns vehicle speed to the set speed.

Resuming is available when the vehicle speed is more than approximately 25 mph (40 km/h).

Driving in vehicle-to-vehicle distance control mode

This mode employs a radar sensor to detect the presence of vehicles up to approximately 400 ft. (120 m) ahead, determines the current vehicle-to-vehicle following distance, and operates to maintain a suitable following distance from the vehicle ahead.

Note that vehicle-to-vehicle distance will close in when traveling on long downhill slopes.



1 Example of constant speed cruising

When there are no vehicles ahead

The vehicle travels at the speed set by the driver. The desired vehicle-to-vehicle distance can also be set by operating the vehicle-to-vehicle distance control.

2 Example of deceleration cruising

When the vehicle ahead is driving slower than the set speed

When a vehicle is detected running ahead of you, the system automatically decelerates your vehicle. When a greater reduction in vehicle speed is necessary, the system applies the brakes. A warning tone warns you when the system cannot decelerate sufficiently to prevent your vehicle from closing in on the vehicle ahead.

3 Example of follow-up cruising

When following a vehicle driving slower than the set speed

The system continues follow-up cruising while adjusting for changes in the speed of the vehicle ahead in order to maintain the vehicle-to-vehicle distance set by the driver.

4 Example of acceleration

When there are no longer any vehicles ahead driving slower than the set speed.

The system accelerates until the set speed is reached. The system then returns to constant speed cruising.

Approach warning

When your vehicle is too close to a vehicle ahead, and sufficient automatic deceleration via the cruise control is not possible, the display will flash and the buzzer will sound to alert the driver. An example of this would be if another driver cuts in front of you while you are following a vehicle. Apply the brakes to ensure an appropriate vehicle-to-vehicle distance.

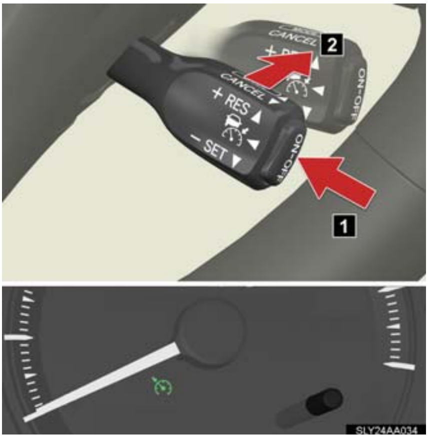
Warnings may not occur when

In the following instances, there is a possibility that the warnings will not occur:

- When the speed of the vehicle ahead matches or exceeds your vehicle speed
- When the vehicle ahead is traveling at an extremely slow speed
- Immediately after the cruise control speed was set
- At the instant the accelerator is applied

Selecting conventional constant speed control mode

Constant speed control mode differs from vehicle-to-vehicle distance control mode. When constant speed control mode is selected, your vehicle will maintain a set speed regardless of whether or not there are other vehicles in the lane ahead.



1 Press the "ON-OFF" button to activate the cruise control.

Press the button again to deactivate the cruise control.

2 Switch to constant speed control mode.
(Push the lever forward and hold for approximately one second.)

Constant speed control mode indicator will come on.

When in constant speed control mode, to return to vehicle-to-vehicle distance control mode, push the lever forward again and hold for approximately 1 second.

After the desired speed has been set, it is not possible to return to vehicle-to-vehicle distance control mode.

If the "POWER" switch is turned off and then turned to ON mode again, the vehicle will automatically return to vehicle-to-vehicle distance control mode.

Adjusting the speed setting:
→P. 218

Canceling and resuming the speed setting: →P. 214

■ Dynamic radar cruise control can be set when

- The shift position is in D.
- Vehicle speed is above approximately 30 mph (50 km/h).

■ Accelerating after setting the vehicle speed

The vehicle can accelerate normally. After acceleration, the set speed resumes. However, during vehicle-to-vehicle distance control mode, the vehicle speed may decrease below the set speed in order to maintain the distance to the vehicle ahead.

■ Automatic cancelation of vehicle-to-vehicle distance control

Vehicle-to-vehicle distance control driving is automatically canceled in the following situations:

- Actual vehicle speed falls below approximately 25 mph (40 km/h).
- Enhanced VSC is activated.
- The sensor cannot operate correctly because it is covered in some way.
- The windshield wipers are operating at high speed (when the wiper switch is set to the AUTO mode or the high speed wiper operating position).

If vehicle-to-vehicle distance control driving is automatically canceled for any other reason, there may be a malfunction in the system. Contact your Lexus dealer.

Automatic cancelation of constant speed control

The cruise control will stop maintaining the vehicle speed in the following situations:

- Actual vehicle speed is more than approximately 10 mph (16 km/h) below the set vehicle speed.
  At this time, the memorized set speed is not retained.
- Vehicle speed falls below approximately 25 mph (40 km/h).
- Enhanced VSC is activated.

Radar sensor and grille cover

Always keep the sensor and grille cover clean to ensure that the vehicle-to-vehicle distance control operates properly. (Some obstructions, such as snow, ice and plastic objects, cannot be detected by the obstruction sensor.)
Dynamic radar cruise control is canceled if an obstruction is detected.



1 Grille cover

2 Radar sensor

Warning lights, messages and buzzers for dynamic radar cruise control

Warning lights, messages and buzzers are used to indicate a system malfunction or to inform the driver of the need for caution while driving. (→P. 503, 513, 516)

Certification

For vehicles sold in the U.S.A.

FCC ID: HYQDNMWR004

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Radiofrequency radiation exposure Information:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20 cm between the radiator (antenna) and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

For vehicles sold in Canada

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

⚠ CAUTION

Before using dynamic radar cruise control

Do not overly rely on vehicle-to-vehicle distance control.
Be aware of the set speed. If automatic deceleration/acceleration is not appropriate, adjust the vehicle speed, as well as the distance between your vehicle and vehicles ahead by applying the brakes etc.

CAUTION

■ Cautions regarding the driving assist systems

Observe the following precautions.
Failure to do so may cause an accident resulting in death or serious injury.

- Assisting the driver to measure following distance
The dynamic radar cruise control is only intended to help the driver in determining the following distance between the driver's own vehicle and a designated vehicle traveling ahead. It is not a mechanism that allows careless or inattentive driving, and it is not a system that can assist the driver in low-visibility conditions. It is still necessary for driver to pay close attention to the vehicle's surroundings.
- Assisting the driver to judge proper following distance
The dynamic radar cruise control determines whether the following distance between the driver's own vehicle and a designated vehicle traveling ahead is appropriate or not. It is not capable of making any other type of judgement. Therefore, it is absolutely necessary for the driver to remain vigilant and to determine whether or not there is a possibility of danger in any given situation.
- Assisting the driver to operate the vehicle
The dynamic radar cruise control has no capability to prevent or avoid a collision with a vehicle traveling ahead. Therefore, if there is ever any danger, the driver must take immediate and direct control of the vehicle and act appropriately in order to ensure the safety of all involved.

■ To avoid inadvertent cruise control activation

Switch the cruise control off using the "ON-OFF" button when not in use.

CAUTION

■ Situations unsuitable for dynamic radar cruise control

Do not use dynamic radar cruise control in any of the following situations. Doing so may result in inappropriate speed control and could cause an accident resulting in death or serious injury.

- In heavy traffic
- On roads with sharp bends
- On winding roads
- On slippery roads, such as those covered with rain, ice and snow
- On steep downhills, or where there are sudden changes between sharp up and down gradients
  Vehicle speed may exceed the set speed when driving down a steep hill.
- At entrances to expressways
- When weather conditions are bad enough that they may prevent the sensors from functioning correctly (fog, snow, sandstorm, heavy rain, etc.)
- When an approach warning buzzer is heard often

■ When the sensor may not be correctly detecting the vehicle ahead

Apply the brakes as necessary when any of the following types of vehicles are in front of you.
As the sensor may not be able to correctly detect these types of vehicles, the approach warning (→P. 222) will not be activated, and a fatal or serious accident may result.

- Vehicles that cut in suddenly
- Vehicles traveling at low speeds
- Vehicles that are not moving
- Vehicles with small rear ends (trailers with no load on board etc.)
- Motorcycles traveling in the same lane

CAUTION

■ Conditions under which the vehicle-to-vehicle distance control may not function correctly

Apply the brakes as necessary in the following conditions as the radar sensor may not be able to correctly detect vehicles ahead, and a fatal or serious accident may result:

- When water or snow thrown up by the surrounding vehicles hinders the functioning of the sensor
- When your vehicle is pointing upwards (caused by a heavy load in the trunk etc.)
- When the road curves or when the lanes are narrow
- When steering wheel operation or your position in the lane is unstable
- When the vehicle ahead of you decelerates suddenly

■ Handling the radar sensor

Observe the following to ensure the cruise control system can function effectively.

Otherwise, the system may not function correctly and could result in an accident.

- Keep the sensor and grille cover clean at all times.
  Clean the sensor and grille cover with a soft cloth so you do not mark or damage them.
- Do not subject the sensor or surrounding area to a strong impact.
  If the sensor moves even slightly off position, the system may malfunction. If the sensor or surrounding area is subject to a strong impact, always have the area inspected and adjusted by a Lexus dealer.
- Do not disassemble the sensor.
- Do not attach accessories or stickers to the sensor, grille cover or surrounding area.
- Do not modify or paint the sensor and grille cover.
- Do not replace them with non-genuine parts.

LKA (Lane-Keeping Assist)*

While driving on a freeway or motor highway that has lane markers, this system recognizes the lanes using a camera as a sensor to assist the driver with staying in the lane. The LKA system has two functions.

■ Lane departure warning function

If the system judges that the vehicle may deviate from its lane, it alerts the driver using rapid beeping, indications on the multi-information display, and a sensory warning* given via the steering wheel.

*: A slight steering torque is applied for a short period of time in the direction of the center of the lane.

■ Lane keeping assist function

This function will be active when the vehicle-to-vehicle distance control mode of the cruise control (→P. 216) is set with vehicle speed above approx. 45 mph (approx. 72 km/h) and while the lane departure warning function is active. When the lane keeping assist function is active, a slight steering torque will be applied, to help the driver maintain the vehicle inside the lane.

*: If equipped

■ **Turning the LKA system on**

The lane departure warning function and lane keeping assist function will be activated depending on the recognition condition of lane markers, vehicle speed and the setting of radar cruise control (vehicle-to-vehicle distance control mode).



Press the “LKA” switch to activate the system.

“LKA” indicator will come on.

Press the switch again to turn the LKA system off.

Operating conditions for each function

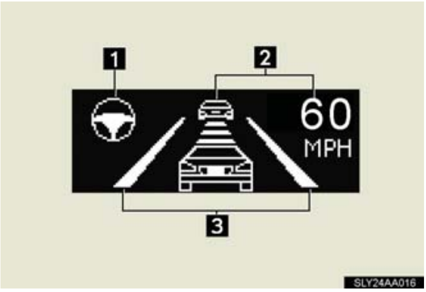
"LKA" switch	Cruise control (vehicle-to-vehicle distance control mode)	Lane departure warning function[*1]	Lane keeping assist function[*2]
On	Off	Available	Not available
	On (While cruising in vehicle-to-vehicle distance control mode with the set vehicle speed approx. 44 mph [approx. 71 km/h] or less)	Available	Not available
	On (While cruising in vehicle-to-vehicle distance control mode with the set vehicle speed approx. 45 mph [approx. 72 km/h] or more)	Available	Available

*1: Vehicle speed is between about 30 and 125 mph (48 and 200 km/h)

*2: Vehicle speed is between about 45 and 112 mph (72 and 180 km/h).

Indication on the multi-information display

While the LKA system is on, the lane line display and steering wheel display (in case of lane keeping assist function) are shown on the multi-information display to inform that the LKA system is on.



1 Steering wheel display

The lane keeping assist function is active.

2 Dynamic radar cruise control display

3 Lane line display

When thin lines are shown:
A lane marker is not recognized by the system, or the LKA system functions are temporarily canceled.

When solid lane lines are shown:
The lane departure warning function is active.

■ Temporary cancellation of the LKA system functions

If any of the following occurs, the LKA system functions will be temporarily canceled. The functions will resume after the necessary operating conditions have returned.

- The turn signal lever is operated.
- The steering wheel is turned as far as necessary to cause the vehicle to change lanes.
- The brake pedal is depressed.
  However, the lane keeping assist function will not resume even after the brake pedal is released because depressing the brake pedal also cancels the dynamic radar cruise control. (only lane departure warning function will resume)
- The vehicle speed deviates from the operating range of the LKA system functions.

- When the lane lines cannot be recognized while driving.
- The wiper operates continuously.
- When the lane departure warning function is activated.
  The lane departure warning function will be temporarily canceled and will not resume until a few seconds elapse after it is activated.

■ No-handed driving warning

If the steering wheel is not operated for about 15 seconds on a straight road or about 5 seconds on a curve, the buzzer will beep twice, indicators on the multi-information display will flash, and the lane keeping assist function will be temporarily canceled. If you drive the vehicle with your hands lightly touching the steering wheel, this may also be detected as no-handed driving.

■ When the vehicle has been parked in the sun

The LKA system functions may not be available for a while after driving has started. In such cases, turn the LKA system off and turn it on again after normal temperature returns. When the temperature in the cabin decreases and the temperature around the camera sensor becomes suitable for its operation, the functions will begin to operate.

■ Warning lights and messages for LKA

Warning lights and messages are used to indicate a system malfunction or to inform the driver of the need for caution while driving. (→P. 503, 516)

CAUTION

■ **Before using the LKA system**

Do not rely on the LKA system to remain within a selected lane. The LKA system is not designed to enable inattentive driving. The steering wheel should be operated by the driver to maintain the vehicle in a suitable position within its lane. Always drive carefully.

■ **Turn the LKA off while driving in any of the following conditions:**

Do not use LKA in any of the following situations.
Otherwise, the system may not function correctly and could result in an accident.

- When driving with snow tires, tire chains, a spare tire, or similar equipment.
- When driving with non-standard parts or aftermarket equipment installed. (including modified tires and suspensions, etc.)
- When towing a trailer.
- When there are objects or structures along the roadside that might be misinterpreted as lane markers. (such as guardrails, curb, reflector posts, etc.)
- When there are wheel ruts, icy trademarks, etc. or if snow remains on the road surface.
- When there are shadows on the road running parallel with lane markers, or if a shadow covers the lane markers.
- When there are visible lines on the pavement from road repairs, or if the remains of old lane markers are still visible on the road.
- When driving on slippery roads, such as those covered with rain, ice or snow.
- When driving in a lane other than the driving or passing lanes on a freeway or highway.
- When driving on a road with lane closures due to maintenance, or when driving in a temporary lane.
- When driving on winding roads or roads that are rough or uneven.

NOTICE

■ In the following situations, the LKA will not work, or will not perform reliably:

- When lane markers are interrupted or are not present, such as before a tollbooth.
- When lane markers are only on one side of the road.
- When driving on a sharp curve.
- When lanes are extremely narrow or extremely wide.
- When the vehicle leans to one side an unusual amount due to a heavy load or improper tire inflation pressure.
- When the following distance between your vehicle and the vehicle ahead is extremely short.
- When the lane markers are broken, “Botts’ dots”, or “Raised pavement marker”.
- When lane markers are obscured or partially obscured by sand, dirt, etc.
- When driving on a particularly bright road surface, such as concrete.
- When driving on a road surface that is bright due to reflected light.
- When driving in a location where the light level changes rapidly, such as the entrance to or exit from a tunnel.
- When sunlight or the headlights of oncoming vehicles are shining directly into the camera lens.
- When driving on roads that are branching or merging.
- When pavement lane markers are difficult to see due to rain, snow, fog, etc.
- When driving on a road surface that is wet due to rain, previous rainfall, standing water, etc.
- When the vehicle experiences strong up-and-down motion such as when driving on an extremely rough road or on a seam in the pavement.
- When headlight brightness is reduced due to dirt on the lenses, or when the headlights are misaligned.
- When driving with a strong crosswind.

NOTICE

Camera sensor



Observe the following to ensure that the LKA system functions correctly.

- Keep the windshield clean at all times.
  LKA performance may deteriorate due to the presence of raindrops, condensation, ice or snow on the windshield.
- Do not attach a sticker or other items to the windshield near the camera sensor.
- When adjusting the rear view mirror, make sure that it does not block the camera lens.
- When it is cold, using the heater with air blowing to the feet may allow the upper part of the windshield to fog up. This will have a negative effect on the images. In such a case, use the windshield defogger to provide warm, dry air to the windshield.
- Do not place anything on the dashboard.
  The camera sensor may recognize the image reflected on the windshield as lane markers by mistake.
- Do not scratch the camera lens, or let it get dirty.
- Do not change the installation position of the camera sensor or remove it. The direction of the camera sensor is precisely adjusted.
- Do not subject the camera sensor to strong impact or force, and do not disassemble the camera sensor.

Driving assist systems

To help enhance driving safety and performance, the following systems operate automatically in response to various driving situations. Be aware, however, that these systems are supplementary and should not be relied upon too heavily when operating the vehicle.

■ ABS (Anti-lock Brake System)

Helps to prevent wheel lock when the brakes are applied suddenly, or if the brakes are applied while driving on a slippery road surface

■ Brake assist

Generates an increased level of braking force after the brake pedal is depressed when the system detects a panic stop situation

■ VSC (Vehicle Stability Control)

Helps the driver to control skidding when swerving suddenly or turning on slippery road surfaces

■ TRAC (Traction Control)

Helps to maintain drive power and prevent the drive wheels from spinning when starting the vehicle or accelerating on slippery roads

■ EPS (Electric Power Steering)

Employs an electric motor to reduce the amount of effort needed to turn the steering wheel

■ Enhanced VSC (Enhanced vehicle stability control)

Provides cooperative control of the ABS, TRAC, VSC and EPS.
Helps to maintain directional stability when swerving on slippery road surfaces by controlling steering performance.

■ PCS (Pre-Collision System) (if equipped)

→P. 245

When the VSC/TRAC systems are operating



If the vehicle is in danger of slipping or if any of the drive wheels spins, the slip indicator light flashes to indicate that the VSC/TRAC systems are operating.

The slip indicator light flashes as well when ABS is operating.

Disabling the TRAC/VSC systems

If the vehicle gets stuck in fresh snow or mud, the TRAC and VSC systems may reduce power from the hybrid system to the wheels. You may need to turn the system off to enable you to rock the vehicle in order to free it.

Turning off the TRAC system only

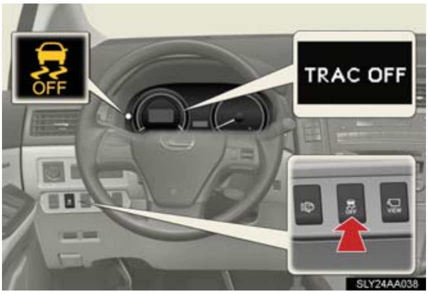


To turn the TRAC system off, quickly press and release the button.

A message will be shown on the multi-information display.

Press the button again to turn the system back on.

Turning off both TRAC and VSC systems



To turn the TRAC and VSC systems off, press and hold the button for more than 3 seconds while the vehicle is stopped.

A message will be shown on the multi-information display and "VSC OFF" indicator will come on.

Press the button again to turn the systems back on.

Sounds and vibrations caused by the ABS, brake assist, VSC and TRAC

- A sound may be heard from the engine compartment when the hybrid system is started, just after the vehicle begins to move, if the brake pedal is depressed forcefully or repeatedly, or 1-2 minutes after the hybrid system is stopped. This sound does not indicate that a malfunction has occurred in any of these systems.
- Any of the following conditions may occur when the above systems are operating. None of these indicates that a malfunction has occurred.
  - Vibrations may be felt through the vehicle body and steering.
  - A motor sound may be heard after the vehicle comes to a stop.
  - The brake pedal may pulsate slightly after the ABS is activated.
  - The brake pedal may move down slightly after the ABS is activated.

EPS operation sound

When the steering wheel is operated, a motor sound (whirring sound) may be heard. This does not indicate a malfunction.

Reactivation of the TRAC /VSC systems

Turning off the hybrid system after turning off the TRAC/VSC systems will automatically reactivate them.

Reactivation of the TRAC system linked to vehicle speed

When only the TRAC system is turned off, the TRAC system will turn on when vehicle speed increases. However, when both TRAC and VSC systems are turned off, the systems will not turn on even when vehicle speed increases.

Reduced effectiveness of the EPS system

The effectiveness of the EPS system is reduced to prevent the system from overheating when there is frequent steering input over an extended period of time. The steering wheel may feel heavy as a result. Should this occur, refrain from excessive steering input or stop the vehicle and turn the hybrid system off. The EPS system should return to normal within 10 minutes.

CAUTION

The ABS does not operate effectively when

- Tires with inadequate gripping ability are used (such as excessively worn tires on a snow covered road).
- The vehicle hydroplanes while driving at high speed on wet or slick road.

Stopping distance when the ABS is operating may exceed that of normal conditions

The ABS is not designed to shorten the vehicle's stopping distance. Always maintain a safe distance from the vehicle in front of you in the following situations:

- When driving on dirt, gravel or snow-covered roads
- When driving with tire chains
- When driving over bumps in the road
- When driving over roads with potholes or roads with uneven surfaces

TRAC may not operate effectively when

Directional control and power may not be achievable while driving on slippery road surfaces, even if the TRAC system is operating.
Do not drive the vehicle in conditions where stability and power may be lost.

When the VSC is activated

The slip indicator light flashes. Always drive carefully. Reckless driving may cause an accident. Exercise particular care when the indicator light flashes.

When the TRAC/VSC systems are turned off

Be especially careful and drive at a speed appropriate to the road conditions. As these are the systems to ensure vehicle stability and driving force, do not turn the TRAC/VSC systems off unless necessary.

CAUTION

■ **Replacing tires**

Make sure that all tires are of the specified size, brand, tread pattern and total load capacity. In addition, make sure that the tires are inflated to the recommended tire inflation pressure level.

The ABS and VSC systems will not function correctly if different tires are installed on the vehicle.
Contact your Lexus dealer for further information when replacing tires or wheels.

■ **Handling of tires and the suspension**

Using tires with any kind of problem or modifying the suspension will affect the driving assist systems, and may cause a system to malfunction.

Hill-start assist control

Hill-start assist control helps to prevent the vehicle from rolling backwards when starting on an incline or slippery slope.



To engage hill-start assist control, further depress the brake pedal when the vehicle is stopped completely.

A buzzer will sound once to indicate the system is activated. The slip indicator will also start flashing.

■ Hill-start assist control can be operated when

- The shift position is in a position other than P.
- The parking brake is not applied.
- The accelerator pedal is not depressed.

■ Hill-start assist control

- While hill-start assist control is operating, the brakes remain automatically applied after the driver releases the brake pedal. The stop lights and the high mounted stoplight turn on.
- Hill-start assist control operates for about 2 seconds after the brake pedal is released.
- If the slip indicator does not flash and the buzzer does not sound when the brake pedal is further depressed, slightly reduce the pressure on the brake pedal (do not allow the vehicle to roll backward) and then firmly depress it again. If the system still does not operate, check if the operating conditions explained above have been met.

Hill-start assist control buzzer

- When hill-start assist control is activated, the buzzer will sound once.
- In the following situations, hill-start assist control will be canceled and the buzzer will sound twice.
  - No attempt is made to drive the vehicle within approximately 2 seconds of releasing the brake pedal.
  - Push the P position switch.
  - The parking brake is applied.
  - The brake pedal is depressed again.
  - The brake pedal has been depressed for more than approximately 3 minutes.

If the slip indicator comes on

It may indicate a malfunction in the system. Contact your Lexus dealer.

CAUTION

Hill-start assist control

- Do not overly rely on hill-start assist control. Hill-start assist control may not operate effectively on extremely steep inclines or roads covered in ice.
- Unlike the parking brake, hill-start assist control is not intended to hold the vehicle stationary for an extended period of time. Do not attempt to use hill-start assist control to hold the vehicle on an incline for an extended period of time, as doing so may lead to an accident.

Pre-Collision System*

When the radar sensor detects possibility of a frontal collision, the pre-collision system such as the brakes and seat belts are automatically engaged to lessen impact as well as vehicle damage.

Pre-collision seat belts (front seat belts only)

If the pre-collision sensor detects that a collision is unavoidable, the pre-collision system will retract the seat belt before the collision occurs.
The same will happen if the driver makes an emergency braking or loses control of the vehicle. (→P. 78)

However, when the VSC system is disabled, the system will not operate in the event of skidding.

Pre-collision brake assist

When there is a high possibility of a frontal collision, the system applies greater braking force in relation to how strongly the brake pedal is depressed.

Pre-collision braking

When there is a high possibility of a frontal collision, the system warns the driver using a warning light, warning display* and buzzer. If the system determines that a collision is unavoidable, the brakes are automatically applied to reduce the collision speed. Pre-collision braking can be disabled using the pre-collision braking off switch.

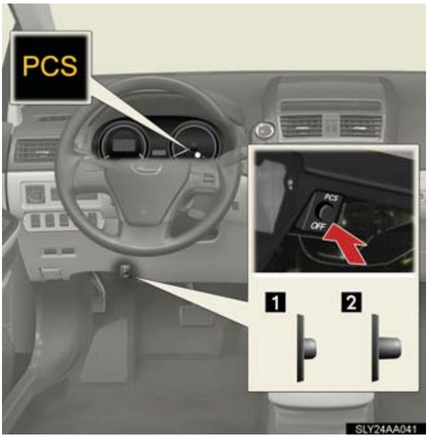
*: When the pre-collision braking system activates, "BRAKE!" will appear on the multi-information display and head-up display (if equipped), and the warning light will begin flashing rapidly. (→P. 520)

Driver monitor system (if equipped)

When the system determines that there is a possibility of a frontal collision, and the driver is not facing forward, PCS warnings are given in advance to warn the driver. If the driver continues to be not facing forward, and a high possibility of a frontal collision is detected, PCS informs the driver of high possibility of a frontal collision by performing slight braking to provide a physically warning (pre-collision alert braking). (→P. 247)

*: If equipped

Disabling pre-collision braking



1 Pre-collision braking disabled

2 Pre-collision braking enabled

The "PCS" warning light will turn on when pre-collision braking is disabled.

Radar sensor



The radar sensor detects vehicles or other obstacles on or near the road ahead and determines whether a collision is imminent based on the position, speed, and heading of the obstacles.

For vehicles equipped with the lane keeping assist, in addition to the radar sensor, the vehicle uses a lane recognition camera in order to determine whether or not a collision is likely to occur. (→P. 237)

Driver monitor sensor (if equipped)



The driver monitor sensor detects the direction the driver is facing. The system determines whether the driver is facing forward.

■ The pre-collision seat belts are operational when

Pre-collision seat belts will activate in the following situations.

● Situation 1:

- Vehicle speed is greater than 19 mph (30 km/h).
- The system detects sudden braking or skidding.
- The front occupants are wearing a seat belt.

● Situation 2:

- Vehicle speed is greater than 4 mph (5 km/h).
- The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than 19 mph (30 km/h).
- The front occupants are wearing a seat belt.

■ The pre-collision systems (other than seat belts) are operational when

● Pre-collision brake assist:

- Vehicle speed is greater than 19 mph (30 km/h).
- The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than 19 mph (30 km/h).
- The brake pedal is depressed.

● Pre-collision braking:

- The pre-collision braking off switch is not pressed.
- Vehicle speed is greater than 10 mph (15 km/h).
- The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than 10 mph (15 km/h).

- Pre-collision alert braking (vehicle with driver monitor system):
  - The pre-collision braking off switch is not pressed.
  - The system determines that the driver is not facing forward.
  - Vehicle speed is greater than 10 mph (15 km/h).
  - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than 25 mph (40 km/h).

■ Conditions that may trigger the system even if there is no possibility of a collision

- When there is an object by the roadside at the entrance to a curve
- When passing an oncoming vehicle on a curve
- When driving over a narrow iron bridge
- When there is a metal object on the road surface
- When driving on an uneven road surface (nose up, nose down)
- When passing an oncoming vehicle on a left-turn
- When your vehicle rapidly closes on the vehicle in front
- When a grade separation/interchange, sign, billboard, or other structure appears to be directly in the vehicle's line of travel
- When climbing a steep hill causes an overhead billboard or other metallic structure to appear directly in the vehicle's line of travel
- When a railing, bar, or similar object can be seen in front of the vehicle
- When the radar sensor is out of alignment (→P. 252)
- When passing through an overpass

When the system is activated in the situations described above, there is also a possibility that the seat belts will retract quickly and the brakes will be applied with a force greater than normal. When the seat belt is locked in the retracted position, stop the vehicle in a safe place, release the seat belt and refasten it.

■ Situations in which the pre-collision system does not function properly
The system may not function effectively in situations such as the following:

- On roads with sharp bends or uneven surfaces
- On slippery roads such as those covered with ice or snow
- If a vehicle suddenly moves in front of your vehicle, such as at an intersection
- If a vehicle suddenly cuts in front of your vehicle, such as when overtaking
- In inclement weather such as heavy rain, fog, snow or sand storms
- When your vehicle is skidding with the VSC system off
- When the radar sensor is out of alignment (→P. 252)

■ Automatic cancellation of the pre-collision system

When a malfunction occurs due to sensor contamination, etc. that results in the sensors being unable to detect obstacles, the pre-collision system will be automatically disabled. In this case, the system will not activate even if there is a collision possibility.

■ Obstacles not detected

The sensor cannot detect plastic obstacles such as traffic cones. There may also be occasions when the sensor cannot detect pedestrians, animals, bicycles, motorcycles, trees, or snowdrifts.

■ If the PCS warning light turns on or flashes

- If the PCS warning light begins flashing and "CHECK PCS SYSTEM" appears on the multi-information display, this indicates a malfunction in the pre-collision system. (→P. 513)
- If the PCS warning light turns on and "PCS TEMPORARILY NOT AVAILABLE" appears on the multi-information display, this indicates that the grille or radar sensor is dirty. (→P. 516)

Certification

For vehicles sold in the U.S.A.

FCC ID: HYQDNMWR004

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Radiofrequency radiation exposure Information:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20 cm between the radiator (antenna) and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

For vehicles sold in Canada

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CAUTION

■ **Limitations of the pre-collision system**

Do not overly rely on the pre-collision system. Always drive safely, taking care to observe your surroundings and checking for any obstacles or other road hazards. Failure to do so may cause an accident resulting in death or serious injury.

■ **Cautions regarding the assist contents of the system**

By means of alarms and brake control, the pre-collision system is intended to assist the driver in avoiding collisions through the process of LOOK-JUDGE-ACT. There are limits to the degree of assistance the system can provide, so please keep in mind the following important points.

- Assisting the driver in watching the road
  The pre-collision system is only able to detect obstacles directly in front of the vehicle, and only within a limited range. It is not a mechanism that allows careless or inattentive driving, and it is not a system that can assist the driver in low-visibility conditions. It is still necessary for the driver to pay close attention to the vehicle's surroundings.
- Assisting the driver in making correct judgment
  When attempting to estimate the possibility of a frontal collision, the only data available to the pre-collision system is that from obstacles it has detected directly in front of the vehicle. Therefore, it is absolutely necessary for the driver to remain vigilant and to determine whether or not there is a possibility of collision in any given situation.
- Assisting the driver in taking action
  The pre-collision system's braking assist feature is designed to help reduce the severity of a collision, and so only acts when the system has judged that a collision is unavoidable. This system by itself is not capable of automatically avoiding a collision or bringing the vehicle to a stop safely. For this reason, when encountering a dangerous situation the driver must take direct and immediate action in order to ensure the safety of all involved.

CAUTION

When the sensor may not be correctly detecting the vehicle ahead

Apply the brakes as necessary in any of the following situations.

- When water or snow thrown up by the surrounding vehicles hinders the functioning of the sensor
- When your vehicle is pointing upwards (caused by a heavy load in the luggage compartment etc.)
- Vehicles that cut in suddenly
- Vehicles with small rear ends (trailers with no load on board etc.)
- Motorcycles traveling in the same lane

Handling the radar sensor

Observe the following to ensure the pre-collision system can function effectively:

- Keep the sensor and front grille cover clean at all times.
  Clean the sensor and front grille cover with a soft cloth so you do not mark or damage them.
- Do not subject the sensor or surrounding area to a strong impact.
  If the sensor moves even slightly off position, the system may become inaccurate or malfunction. If the sensor or surrounding area is subject to a strong impact, always have the area inspected and adjusted by your Lexus dealer.
- Do not disassemble the sensor.
- Do not attach accessories or stickers to the sensor, grille cover or surrounding area.
- Do not modify or paint the sensor and grille cover.

Determining the direction the driver is facing (vehicles with driver monitor sensor)

The direction the driver is facing may not be determined correctly if the following conditions exist:

- There is an object between the driver monitor sensor and the driver’s face, such as when the sensor is blocked.
- A part of the driver’s face is covered.
- The sensor or the driver’s face is exposed to intense light such as sunlight.
- The driving posture is improper.

CAUTION

■ Handling the driver monitor sensor (vehicles with driver monitor sensor)

Observe the following to ensure the driver monitor sensor can function effectively. Failure to do so may result in a malfunction or may prevent the system from correctly determining the direction the driver is facing, resulting in an unexpected accident.

- Do not disassemble, damage, lift or pull on the sensor.
- Do not touch the sensor while driving.
- Do not wet or spill water on the sensor.
- Do not drop anything on or allow anything to hit against the sensor. Do not subject the sensor to an impact.
- Make sure that there are no scratches, dirt or stickers on the side of the sensor that faces the driver.
- Do not place any objects in front of the side of the sensor that faces the driver or cover the sensor.

NOTICE

■ Precautions for cleaning the driver monitor sensor (vehicles with driver monitor sensor)

- Gently wipe the sensor with a soft cloth to prevent damage.
- Wipe any excess dirt with a cloth dampened with neutral detergent, all liquids having been wrung out of the cloth. After that, wipe again with a dry cloth.
- Do not use benzene, thinner, glass cleaners, wax, etc.